102d Congress
1st Session

COMMITTEE PRINT

(102-10)

1991 INTERSTATE COST ESTIMATE

REPORT

FROM

THE SECRETARY OF TRANSPORTATION

TRANSMITTING

A REPORT OF FACTORS FOR USE IN APPORTIONING FUNDS FOR THE DWIGHT D. EISENHOWER SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS

JULY 1991

Printed for the use of the Committee on
Public Works and Transportation

U.S. GOVERNMENT PRINTING OFFICE

45-224 WASHINGTON : 1991

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

H642-4

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

ROBERT A. ROE, New Jersey, *Chairman*

GLENN M. ANDERSON, California, *Vice Chair*
NORMAN Y. MINETA, California
JAMES L. OBERSTAR, Minnesota
HENRY J. NOWAK, New York
NICK JOE RAHALL II, West Virginia
DOUGLAS APPLEGATE, Ohio
RON DE LUGO, Virgin Islands
GUS SAVAGE, Illinois
ROBERT A. BORSKI, Pennsylvania
JOE KOLTER, Pennsylvania
TIM VALENTINE, North Carolina
WILLIAM O. LIPINSKI, Illinois
PETER J. VISCLOSKY, Indiana
JAMES A. TRAFICANT, JR., Ohio
JOHN LEWIS, Georgia
PETER A. DEFAZIO, Oregon
JIMMY HAYES, Louisiana
BOB CLEMENT, Tennessee
LEWIS F. PAYNE, JR., Virginia
JERRY F. COSTELLO, Illinois
FRANK PALLONE, JR., New Jersey
BEN JONES, Georgia
MIKE PARKER, Mississippi
GREG LAUGHLIN, Texas
PETE GEREN, Texas
GEORGE E. SANGMEISTER, Illinois
GLENN POSHARD, Illinois
DICK SWETT, New Hampshire
BILL K. BREWSTER, Oklahoma
BUD CRAMER, Alabama
ROSA L. DELAURO, Connecticut
JOAN KELLY HORN, Missouri
BARBARA-ROSE COLLINS, Michigan
PETE PETERSON, Florida
ELEANOR HOLMES NORTON, District of Columbia
JOHN PAUL HAMMERSCHMIDT, Arkansas
BUD SHUSTER, Pennsylvania
WILLIAM F. CLINGER, JR., Pennsylvania
THOMAS E. PETRI, Wisconsin
RON PACKARD, California
SHERWOOD BOEHLERT, New York
HELEN DELICH BENTLEY, Maryland
JAMES M. INHOFE, Oklahoma
CASS BALLENGER, North Carolina
FRED UPTON, Michigan
BILL EMERSON, Missouri
JOHN J. DUNCAN, JR., Tennessee
MEL HANCOCK, Missouri
CHRISTOPHER COX, California
SUSAN MOLINARI, New York
DAVID L. HOBSON, Ohio
FRANK D. RIGGS, California
CHARLES H. TAYLOR, North Carolina
DICK NICHOLS, Kansas
WILLIAM H. ZELIFF, JR., New Hampshire
THOMAS W. EWING, Illinois

SUBCOMMITTEE ON SURFACE TRANSPORTATION

NORMAN Y. MINETA, California, *Chairman*

GLENN M. ANDERSON, California, *Vice Chair*
NICK JOE RAHALL II, West Virginia
DOUGLAS APPLEGATE, Ohio
RON DE LUGO, Virgin Islands
TIM VALENTINE, North Carolina
WILLIAM O. LIPINSKI, Illinois
PETER J. VISCLOSKY, Indiana
JAMES A. TRAFICANT, JR., Ohio
JOHN LEWIS, Georgia
BOB CLEMENT, Tennessee
LEWIS F. PAYNE, JR., Virginia
JERRY F. COSTELLO, Illinois
FRANK PALLONE, JR., New Jersey
BEN JONES, Georgia
MIKE PARKER, Mississippi
GREG LAUGHLIN, Texas
GEORGE E. SANGMEISTER, Illinois
PETER A. DEFAZIO, Oregon
PETE GEREN, Texas
GLENN POSHARD, Illinois
DICK SWETT, New Hampshire
BILL K. BREWSTER, Oklahoma
BUD CRAMER, Alabama
ELEANOR HOLMES NORTON, District of Columbia
ROBERT A. ROE, New Jersey (ex officio)
BUD SHUSTER, Pennsylvania
WILLIAM F. CLINGER, JR., Pennsylvania
THOMAS E. PETRI, Wisconsin
RON PACKARD, California
SHERWOOD BOEHLERT, New York
FRED UPTON, Michigan
BILL EMERSON, Missouri
CHRISTOPHER COX, California
DAVID L. HOBSON, Ohio
FRANK D. RIGGS, California
CHARLES H. TAYLOR, North Carolina
DICK NICHOLS, Kansas
WILLIAM H. ZELIFF, JR., New Hampshire
JOHN PAUL HAMMERSCHMIDT, Arkansas (ex officio)

LETTER OF TRANSMITTAL

THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

February 4, 1991

The Honorable Thomas S. Foley
Speaker of the House of Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

In accordance with the requirements of Section 104(b)(5)(A), Title 23, United States Code, I am transmitting a revised estimate of the cost to complete the Dwight D. Eisenhower System of Interstate and Defense Highways prepared for the purpose of determining apportionment factors for Interstate System funds authorized for the fiscal year ending September 30, 1993.

The factors contained in this estimate are derived from the review and analysis of estimates of costs set forth in bound volumes of individual State reports. Because of their bulk, the State reports are being sent directly to the House Committee on Public Works and Transportation.

This estimate includes the costs for the construction necessary to provide a minimum level of acceptable service on the Interstate System as defined in the Federal-Aid Highway Act of 1981, which amended Subsection (b) of Section 108 of the Federal-Aid Highway Act of 1956, and the provisions of the Surface Transportation and Uniform Relocation Assistance Act of 1987. This estimate has been prepared as a joint effort by the Federal Highway Administration and the State highway agencies using uniform procedures.

The factors herein reflect proportionate needs based on completion of the Interstate System in accordance with Section 108(b) of the Federal-Aid Highway Act of 1956, as amended. We have used this estimate in conjunction with our proposal for reauthorization of the highway program which will be transmitted to you soon.

Sincerely,

Samuel K. Skinner

Samuel K. Skinner

Enclosure

THE 1991 INTERSTATE SYSTEM COST ESTIMATE:

A REPORT OF FACTORS FOR USE IN APPORTIONING FUNDS FOR THE DWIGHT D. EISENHOWER SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS

EXECUTIVE SUMMARY

The remaining cost to complete the Interstate System is estimated, as of January 1, 1990, to be $12.9 billion, of which $11.7 billion is the Federal share. The estimated total cost of the entire System when completed is $128.9 billion, with a Federal share of $114.3 billion. This is an overall cost increase of $4.0 billion from the total cost in the 1989 Interstate Cost Estimate.

The 1991 Interstate Cost Estimate has been prepared by the Federal Highway Administration and the individual State highway agencies in accordance with Section 4(c) of the Federal-Aid Highway Act of 1981 and includes only the estimated costs of those design concepts, locations, geometrics and other construction features included in the 1981 Interstate Cost Estimate except where the Secretary has determined a Federal law requires a change to those designs, locations, geometrics or other construction features. In accordance with Section 4(b), the work represented in the 1991 estimate basically includes completion of gaps, major upgrading of incorporated segments which were not built with Interstate funds, essential stage construction, and added mixed traffic lanes and high occupancy vehicle lanes included in the 1981 estimate. Costs for essential environmental requirements are included as part of gap or major upgrading projects as appropriate.

The added authorizations and other provisions of the Surface Transportation Assistance Act of 1982 and the Surface Transportation and Uniform Relocation Assistance Act of 1987 have been considered to the extent appropriate in the preparation of this estimate. In accordance with the requirements of Title 23, United States Code (23 U.S.C.), Section 104(b)(5)(A), Table 5 of this report presents the factors for apportioning Interstate construction funds for fiscal year 1993.

PURPOSE AND SCOPE OF REPORT

Section 104(b)(5)(A), Title 23, United States Code ("Highways"), requires the Secretary of Transportation to make this revised estimate of the cost of completing the designated Interstate Highway System and transmit this report to the Senate and the House of Representatives.

The purpose of the estimate, as summarized in Table 5, is to derive the ratio of the Federal share of the estimated cost of completing the Interstate System in each State to the sum of the Federal share of these costs in all the States. These ratios will serve as the basis for apportioning funds authorized for fiscal year 1993. This method of apportionment is specified in 23 U.S.C. 104(b)(5)(A). (Note that Interstate construction funds are apportioned a year in advance of authorization; thus fiscal year 1993 funds are apportioned in fiscal year 1992).

The estimate for apportionment purposes, presented herein, is the 15th of a series of estimates to be submitted to the Congress in accordance with the law. Following is a tabulation of previous cost estimates along with congressional document reference numbers and fiscal year of funding in which each was used to apportion funds:

Date Submitted	Document Number	Congress	Session	Fiscal Year Apportionment
January 1958	House Doc. 300	85th	2nd	1960-1962
January 1961	House Doc. 49	87th	1st	1963-1966
January 1965	House Doc. 42	89th	1st	1967-1969
January 1968	House Doc. 199	90th	2nd	1970,1971
April 1970	House Doc. 91-317	91st	2nd	1972,1973
January 1972	Comm. Print 92-29	92nd	2nd	1974-1976
July 1975	Comm. Print 94-14	94th	1st	1977
Revision	Comm. Print 94-38	94th	2nd	1978
May 1977	Comm. Print 95-11	95th	1st	--
Revision	Comm. Print 95-16	95th	1st	1979
Revision	Comm. Print 95-49	95th	2nd	1980
August 1979	Comm. Print 96-14	96th	1st	--
Revision	Comm. Print 96-15	96th	1st	1981,1982
January 1981	Comm. Print 97-1	97th	1st	--
Revision	Comm. Print 97-28	97th	1st	1983
Revision	Comm. Print 97-53	97th	2nd	1984
March 1983	Comm. Print 98-1	98th	1st	--
Revision (to 97-53)	Comm. Print 98-10	98th	2nd	one-half 1985
January 1985	Comm. Print 99-1	99th	1st	--
Revision	Comm. Print 99-2	99th	1st	Remainder 1985 and 1986
Revision	Comm. Print 99-68	99th	1st	1987

Date Submitted	Document Number	Congress	Session	Fiscal Year Apportionment
January 1987	Comm. Print 100-4	100th	1st	--
Revision	Comm. Print 100-5	100th	1st	1988
Revision *	" " "	---	---	1989
Revision *	" " "	---	---	1990
January 1989	Comm. Print 101-3	101st	1st	--
Revision *	" " "	---	---	1991
Revision *	" " "	---	---	1992

* The Surface Transportation and Uniform Relocation Assistance Act of 1987 modified Section 104(b)(5)(A) of Title 23 to require the Secretary to administratively adjust the last Interstate Cost Estimate and make apportionments on October 1 of each of fiscal years 1988 through 1991, whenever Congress has not approved a cost estimate. Funds were apportioned on this basis for fiscal years 1989 through 1992.

The cost presented in this report for completing the Interstate System represents work eligible for Interstate construction funds as defined in Section 4(b) of the Federal-Aid Highway Act of 1981 which amended Section 108(b) of the 1956 Federal-Aid Highway Act, and work eligible in accordance with the provisions of the Surface Transportation Assistance Act of 1982 (STAA) and the Surface Transportation and Uniform Relocation Assistance Act of 1987 (STURAA). The eligibility criteria are detailed in the 1991 Interstate Cost Estimate Instruction Manual and include essential work for gap construction and major upgrading of incorporated segments which have had no major Interstate funding, including essential environmental requirements; essential stage construction; and approved additional mixed traffic lane and high occupancy vehicle lane projects which were included in the 1981 estimate. In addition to the estimate of the cost of completing the Interstate System, there is included in this report an estimate of the total cost of the System covering past obligations against the Highway Trust Fund together with State matching funds. The latter total cost estimate is summarized in Tables 6 and 7 showing a comparison of the present estimate with the estimate presented to the Congress in the 1989 estimate.

DESIGNATED SYSTEM COVERED BY THIS ESTIMATE

Public Law 101-427 officially named the Interstate System in honor of President Eisenhower, as The Dwight D. Eisenhower System of Interstate and Defense Highways. Generally known as the Interstate System, it was originally designated under authority in the Federal-Aid Highway Act of 1944. Under the original authorization the System was not to exceed 40,000 miles in total length and was located to connect by routes as direct as practicable, the

principal metropolitan areas, cities, and industrial centers, to serve the national defense and to connect at suitable border points with the routes of continental importance in the Dominion of Canada and the Republic of Mexico.

The Interstate System was selected by joint action of the State highway departments and the Bureau of Public Roads, and routes were designated on August 2, 1947, and comprised an estimated 37,700 miles. Additional routes, limited to those around and through the urban areas and totaling an estimated 2,300 miles, were designated in September 1955. At the time of the initial System designations, detailed location studies with the necessary engineering and economic analyses were lacking. The locations, therefore, were diagrammatic only, and the designated mileages were those of the measured length of the existing principal highways lying generally on the chosen locations. Further studies led to definite locations based upon more precise engineering and economic information. The length of the System, so established, was determined to be 38,548 miles for routes included in the first estimate submitted to the Congress in January 1958.

Section 108(1) of the 1956 act (later largely codified as part of Title 23, United State Code) increased the statutory maximum length of the Interstate System from 40,000 to 41,000 miles, but the legislation specifically excluded the cost of the routes which would be designated as a result of the additional 1,000 miles, from the estimate to be used for apportionment purposes. The Federal-Aid Highway Act of 1960 included an amendment of Title 23, United States Code, which removed this restriction from the law.

On October 18, 1957, 2,102 miles of Interstate routes were added to the System. The addition of these routes was possible because of the 1,000-mile extension authorized by the 1956 act, and the availability of 1,102 miles of the original 40,000-mile authorization, through savings in mileage resulting from the definite location and the more accurate measurement of the System as described in earlier paragraphs. A reserve of 350 miles was held to cover possible increases in lengths of designated routes.

Section 17 of the Hawaii Omnibus Act amended 23 U.S.C. and (1) removed the limitation that the Interstate System be designated entirely within the continental United States, (2) provided for the apportionment from the Highway Trust Fund to Hawaii of $12,375,000 of Interstate funds for the fiscal year ending June 30, 1962, and (3) provided for the apportionment to Hawaii of Interstate funds for subsequent fiscal years in accordance with the provisions of 23 U.S.C. 104(b)(5). Under the provisions of this amendment, in August 1960, the Federal Highway Administrator approved the addition of three routes to the Dwight D. Eisenhower System of Interstate and Defense Highways on the island of Oahu in the State of Hawaii. These additions to the System were included in the 1961 and subsequent estimates.

Not all of the routes expected to be added to the System under the 1,102 miles available from the original 40,000 miles were designated at the time of the 1961 and 1965 estimates. The costs of the segments not on an approved final location, totalling about 220 miles, were entered in the 1961 estimate at a cost of $1 million per mile. The mileage reserved for final System measurement, approximately 308 miles, was also entered in the 1961 estimate at $1 million per mile.

During the period between the 1961 estimate and January 1, 1964, the cutoff date for the 1965 estimate, all but 93 miles of the route segments included in the 220-mile group cited above had been given final location approval and were included in the 1965 estimate at the then current estimate of their construction cost.

The costs of the segments not on final approved locations, totalling about 93 miles, were entered in the 1965 estimate at a cost of $5 million per mile. The mileage reserved for final measurement, approximately 21 miles, was also entered in the 1965 estimate at $5 million per mile.

During the period between the 1965 estimate and January 1, 1967, the cutoff date for the 1968 estimate, most of the route segments represented in the 93-mile group cited above were given final location approval and included in the 1968 estimate. Thirty-one miles, reserved for final measurement in the 1968 estimate, were estimated at $10 million per mile.

The Federal-Aid Highway Act of 1968 authorized an additional 1,500 miles on the Interstate System. On December 13, 1968, routes totalling 1,473 miles were designated from the additional mileage authorized.

During the period between the 1968 estimate and November 1, 1969, the cutoff date for the 1970 estimate, all but 5 miles were given final location approval and included in the 1970 estimate. The 5 miles reserved for final measurement in the 1970 estimate were included in the estimate at $10 million per mile.

Subsequent adjustments to the System, including new routes, have been made. The Surface Transportation Assistance Act of 1978 specified in Section 140 that Interstate routes be designated in Los Angeles, California, and in Erie and Onondaga Counties, New York. Section 209 of the Supplemental Appropriations Act for 1978 provided for the designation of a spur in Tacoma, Washington, while Section 311 of the appropriations act for 1980 provided for the extension of I-164 in Evansville, Indiana. The appropriations act for 1981, in Section 310, provided for extension of I-170 in St. Louis and the designation of I-210 in Alabama, a connector in the vicinity of Mobile (I-210 was later shortened and renumbered as I-165 pursuant to Section 133(f) of the Surface Transportation and Uniform Relocation Assistance Act of 1987). All of these routes

have been designated and the estimated costs for constructing the routes are included in the same manner as other toll free routes.

Public Law 90-238, approved January 2, 1968, amended Section 103, Title 23, United States Code, to authorize an additional 200 miles for the Interstate System to be used for adjustments in the System without an increase to the cost. This provision was amended by both the 1973 and 1976 Federal-Aid Highway Acts, which increased this mileage increment from 200 to 500 miles and also revised the method for determining amounts available for such adjustments. The Surface Transportation Assistance Act of 1978 further amended this provision to provide full funding of the routes designated under this provision and to prohibit additional route designations. Adjustments under 23 U.S.C. 103(e)(2) have been made in 10 States.

The System to be constructed with Interstate construction funds apportioned under 23 U.S.C. 104(b)(5)(A) consists of System mileage designated under Section 103(e)(1), 103(e)(2) and 103(e)(3) totalling 42,799 miles as of December 31, 1989. With a reserve of 106 miles available for the more precise measurement of routes as final plans and locations are developed, the final System measurements are expected to keep the total mileage within the authorized limit. The basic System mileage plus the 402 miles designated under Section 103(e)(2) are shown in Tables 1 and 2.

Table 1 shows the System mileage as it was reported in the 1989 estimate, and as it exists for the 1991 estimate.

TABLE 1 - Mileage Estimates

1989 Estimate:	
System mileage reported in the 1987 estimate, and System additions and adjustments reported by States in this estimate	42,392
Reserved for final measurement	108
System mileage designated under 23 U.S.C. 103(e)(2)	405
Total mileage	42,905
1991 Estimate:	
System mileage reported in the 1989 estimate, and System additions and adjustments reported by States in this estimate	42,397
Reserved for final measurement	106
System mileage designated under 23 U.S.C. 103(e)(2)	402
Total mileage	42,905

The 1973 Federal-Aid Highway Act further amended 23 U.S.C. 103, adding Subsection (e)(4) to permit the withdrawal of routes or segments in urbanized areas and the substitution of nonhighway public mass transit projects. Only those routes or segments which were not essential to a unified and connected system were eligible for withdrawal. The provision was revised by the 1976 Federal-Aid Highway Act to also permit the withdrawal of segments connecting urbanized areas within a State and the substitution of highway projects in addition to nonhighway transit projects. The 1978 Federal-Aid Highway Act prohibited further withdrawals after September 30, 1983, except for certain routes under injunction. The 1982 Surface Transportation Assistance Act further extended the provisions to rural segments and authorized funding from the Highway Trust Fund of substitute highway projects. Forty-nine separate actions involving the withdrawal of 343 miles have been approved under this provision. The costs for withdrawn segments are not included in this estimate.

The 1970 Federal-Aid Highway Act amended 23 U.S.C. 129, by adding new subsection (e), for the purpose of permitting "Federal participation in the (cost of) reconstruction, and improvement of any toll road providing for only two lanes of traffic, which is designated as part of the Interstate System on date of enactment of this subsection . . . to bring such two-lane toll road to the geometric and construction standards of the Interstate System . . . to facilitate the removal of tolls therefrom." The 1973 Federal-Aid Highway Act amended this new provision to apply to any two-lane toll roads designated as part of the Interstate System on or before June 30, 1973. The amended subsection applies to a portion of the West Virginia Turnpike (I-77), a segment of I-790 in Utica, New York, and a portion of Alligator Alley (I-75), in Florida. The costs shown in this estimate for these routes are estimated and reported in the same manner as for other free routes.

The Federal-Aid Highway Act of 1968 added Section 139 to 23 U.S.C., to permit Interstate designation of highway segments on the Federal-aid primary system at the request of the State or States involved, if the segments meet all of the standards for highways on the Interstate System and if they are logical additions or connections. Mileage designated under this section is not chargeable as part of the limitation established in 23 U.S.C. 103 and creates no Interstate construction funding responsibility. Hence, no costs for work on segments designated under this section are included in this estimate.

Plate A shows the location of the designated routes which form the basis for this estimate. Table 2 shows the mileage of the Interstate System and other Federal-aid highway systems in each of the States. Mileage designated under 23 U.S.C. 139 is not included in the Interstate System mileage of Table 2.

Plate A

THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS

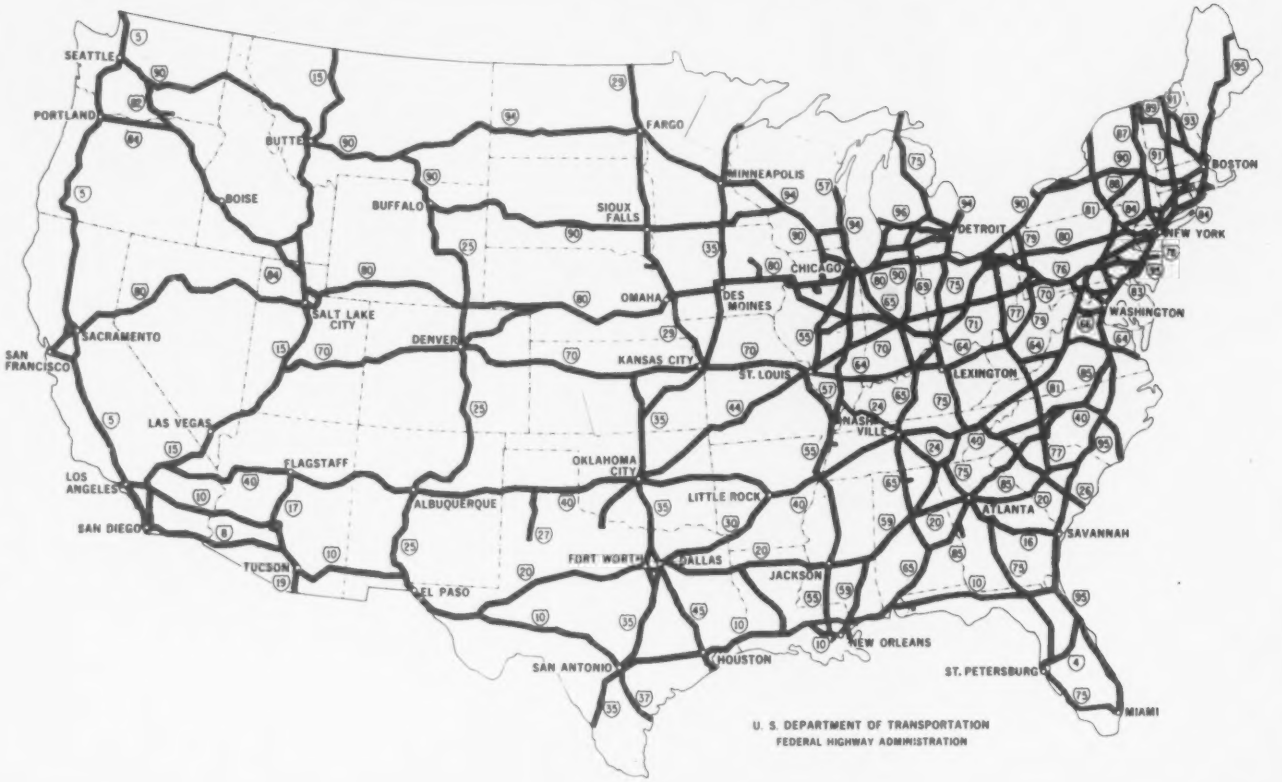

TABLE 2
ESTIMATE OF DESIGNATED
FEDERAL-AID HIGHWAY SYSTEM MILEAGES
JANUARY 1, 1990

STATE	INTERSTATE	OTHER FEDERAL-AID PRIMARY	FEDERAL-AID SECONDARY	FEDERAL-AID URBAN	TOTAL
ALABAMA	905	6,897	11,652	2,950	22,404
ALASKA	—	1,019	2,608	239	3,866
ARIZONA	1,167	3,541	3,233	2,594	10,535
ARKANSAS	526	5,378	7,369	1,206	14,479
CALIFORNIA	2,312	11,299	11,354	18,527	43,492
COLORADO	951	4,349	3,410	2,396	11,106
CONNECTICUT	291	1,387	902	2,975	5,555
DELAWARE	41	486	604	319	1,449
DIST. OF COLUMBIA	14	173	—	236	423
FLORIDA	1,460	8,021	4,377	4,588	18,446
GEORGIA	1,200	10,460	14,062	4,055	29,777
HAWAII	51	517	457	322	1,347
IDAHO	612	2,790	4,156	787	8,345
ILLINOIS	1,715	11,168	13,003	6,898	32,784
INDIANA	1,137	5,111	9,705	4,891	20,844
IOWA	782	8,975	13,536	2,532	25,825
KANSAS	821	8,136	22,609	1,637	33,203
KENTUCKY	741	4,056	7,337	1,973	14,107
LOUISIANA	872	3,195	7,343	2,143	13,553
MAINE	315	2,062	2,742	718	5,837
MARYLAND	394	2,276	1,916	2,257	6,843
MASSACHUSETTS	462	2,330	2,007	5,904	10,703
MICHIGAN	1,174	7,321	17,046	5,677	31,218
MINNESOTA	913	9,310	16,652	2,281	29,156
MISSISSIPPI	683	6,817	11,730	1,771	21,001
MISSOURI	1,153	7,078	18,089	2,523	28,843
MONTANA	1,188	5,452	4,752	349	11,741
NEBRASKA	481	7,209	11,461	1,074	20,225
NEVADA	543	1,886	2,362	593	5,384
NEW HAMPSHIRE	219	1,166	1,234	731	3,350
NEW JERSEY	422	1,557	1,755	5,458	9,192
NEW MEXICO	1,000	3,577	3,930	563	9,070
NEW YORK	1,393	8,513	6,300	8,770	24,976
NORTH CAROLINA	848	4,921	10,342	3,047	19,158
NORTH DAKOTA	571	5,539	10,618	530	17,258
OHIO	1,530	6,614	11,700	7,932	27,776
OKLAHOMA	809	5,505	11,775	3,063	21,152
OREGON	720	5,081	7,821	2,057	15,679
PENNSYLVANIA	1,564	9,969	8,001	7,058	26,592
RHODE ISLAND	71	419	201	926	1,617
SOUTH CAROLINA	772	5,915	8,593	1,225	16,505
SOUTH DAKOTA	679	5,999	10,985	258	17,921
TENNESSEE	1,037	6,217	5,457	3,207	15,918
TEXAS	3,163	17,115	32,738	8,567	61,583
UTAH	941	2,625	2,689	1,054	7,309
VERMONT	320	1,163	1,917	357	3,757
VIRGINIA	1,065	5,574	10,318	3,608	20,565
WASHINGTON	764	5,117	7,323	4,339	17,543
WEST VIRGINIA	515	2,445	6,368	787	10,115
WISCONSIN	578	9,444	12,987	3,090	26,099
WYOMING	914	2,989	2,266	672	6,841
PUERTO RICO	—	585	867	629	2,081
TOTAL	42,799	266,747	402,659	152,342	864,547

Interstate system includes mileage designated under 23 U.S.C. 103(e)(1), 103(e)(2), and 103(e)(3), but does not include 1,446 miles designated under 23 U.S.C. 139(a).

UNIFORM APPLICATION OF STANDARDS

Section 109(b), of 23 U.S.C., provides that the geometric and construction standards to be adopted for the Interstate System shall be those adopted by the Secretary in cooperation with the State highway departments. This section was amended in 1963 to provide that such standards shall be adequate to accommodate the types and volumes of traffic anticipated for a project for the 20-year period commencing from actual construction of such projects. Section 109(b) was further amended in 1966 to state that the standards for the Interstate System shall in all cases provide for at least four lanes of traffic. However, this provision was modified by subsequent legislation to permit the construction of several special purpose roadways and projects of less than four lanes.

Section 109(b) provides also that the Secretary shall apply the standards uniformly throughout the States. Appropriate committees composed of State and Federal engineers, working under the sponsorship of the American Association of State Highway and Transportation Officials (AASHTO), developed the geometric design standards for the Interstate System. These standards were adopted by AASHTO on July 12, 1956, and approved July 17, 1956, by the Commissioner of Public Roads, acting for the Secretary. Revisions to the standards have been adopted by AASHTO and approved for the Secretary as the need for these changes occurred.

Section 104(b)(5)(A), of 23 U.S.C., provides that the Secretary shall make the revised estimate of the cost of completing the Interstate System on the basis of the standards referred to above and in accordance with rules and regulations adopted by the Secretary and applied uniformly to all of the States. The instruction manual developed for this estimate cited these standards. This manual, together with the standards, guides, specifications, and laws to which it makes reference, and the clarification of the manual provisions served as the "rules and regulations" for preparation of the estimate.

The Federal-Aid Highway Act of 1981, in Section 4(b), redefined construction eligibility for obligation of Interstate construction funding. The act did not change design standards, which are applied uniformly to all States. Eligible projects under the redefinition include gap completion, major upgrading of incorporated segments, approved stage construction, and the addition of mixed lanes and high occupancy vehicle lanes where approved and included in the 1981 estimate. Where such work is eligible on these projects, the estimate reflects the cost to incorporate the latest safety features, and to provide essential environmental requirements in order to mitigate environmental effects such as air, noise, and water pollution. Where items of work are not eligible for Interstate construction funding, but are required to meet design standards, the work is still eligible for

Interstate funding in the form of Interstate 4R funding. The Federal-Aid Highway Act of 1981 changed the resurfacing, restoration, and rehabilitation (RRR) program to a new post-Interstate construction program (4R program) by adding "reconstruction" to the definition of eligible work. Increased funding levels through fiscal year 1992 were provided by the 1981 act and subsequent legislation. The Interstate program is considered a "dual funded" program (initial construction and Interstate 4R program). This estimate includes only work considered "initial construction" under existing administrative policies governing the use of Interstate construction funds, and excludes the costs of 4R work which, under Section 102(c) of the 1976 Federal-Aid Highway Act, are not eligible for participation with Interstate construction funds.

The exchange of information and instruction on a national basis, together with the liaison between the State highway personnel and Federal Highway Administration (FHWA) personnel at division and regional levels during preparation of the estimate, provided the means of achieving uniformity.

This estimate, prepared on the basis of a uniform set of rules applied uniformly throughout the States, results in a report of estimated costs to complete the Interstate System which is a sound reflection of the relative needs of the several States and an equitable basis for apportioning funds among the States to ensure that all States may pursue timely completion of their portion of the System. It remains, however, an estimate based upon the best engineering judgement of the State highway departments and the FHWA of what it would cost at this date to complete the designated Interstate System if construction were performed at the unit prices of calendar year 1989. In applying the governing guidelines and engineering judgement in the development of this estimate, the latest plans available at the time were used in the estimate preparation. In accordance with the Federal-Aid Highway Act of 1981, in Section 4(b), our instructions specifically prohibited inclusion of design concepts, locations, and other construction features not included in the 1981 estimate unless approved pursuant to that section, or otherwise. However, costs for minor design refinements have been included.

The individual estimates of the several States, or the estimates of individual routes within a State, although prepared on a uniform basis and reflecting uniform design criteria, will not result in uniform construction costs per mile of highway, uniform right-of-way costs per mile, or uniform average values among the States for any other remaining work. A comparison of such averages is meaningless because of the wide variation of traffic conditions, topography, climate, status of development, and other factors peculiar to the section of highway being considered.

Within the scope of practical uniformity there is a balance between traffic needs in a particular circumstance and the highway design used to satisfy that need. There is, and there has to be, provision for some range and variation in design to properly reflect the many varying factors involved under different local conditions. Uniformity in this sense, therefore, means the application in all States of the design range provided in the geometric design standards approved for the Interstate System pursuant to 23 U.S.C. and within the limitations of the eligibility provisions in Section 4(b) of the 1981 act.

ESTIMATE PREPARATION AND BASIC PRINCIPLES AND PROCEDURES FOLLOWED

The estimate of the cost of completing the Interstate System was prepared in each State by personnel of the State highway department and the division office of the FHWA. Representatives from the FHWA regional offices worked closely with the State and division office personnel in its preparation. Representatives from FHWA Headquarters traveled to many of the States during the course of the estimate preparation. These trips at periodic intervals by individuals who had traveled in other regions on the estimate reviews helped to provide the interregional inspection and correlation necessary to assure a high level of uniformity on a nationwide basis.

Each State assembled its estimate in a bound volume following a standard format which included maps showing the location of the Interstate segments being estimated in that State, plates showing the engineering features, and tables listing the design criteria, route section mileages, and estimated costs for each section, broken down into major elements of construction. Twenty-two States - Arkansas, Delaware, Idaho, Illinois, Indiana, Iowa, Kansas, Maine, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Rhode Island, South Dakota, Utah, Vermont, West Virginia, and Wyoming, submitted abbreviated estimates because they have either minimal or no eligible costs to report.

In preparing this estimate of the cost of completing the Interstate System, the date January 1, 1990, was selected as the cutoff date, and all Federal-aid work on which the FHWA had authorized the State to proceed as of the close of books for the month of December 1989 was considered as having been completed under the financing arrangements then in effect. This means that the cost of any work on the Interstate System which was to be accomplished with funds already assigned (obligated) for construction has not been included in this estimate. Similarly, right-of-way costs and preliminary engineering costs for which authorization to proceed had been given and funds obligated as of January 1, 1990, are not included in this revised estimate of the cost of completing the Interstate System.

In providing a uniform basis for estimate preparation, it was necessary to select a common base period for the unit construction prices to be used in the estimate. The unit prices for this estimate in any State are based on weighted average low bid prices in the State for construction awarded to contract during the calendar year 1989. Thus, the price base used represents the most recent data available at estimate preparation time.

Each State's estimate, when completed, was forwarded through the field offices of the FHWA to the Washington Headquarters where the estimates have been reviewed and evaluated for submission of this report to the Congress.

COST SUMMARIES AND APPORTIONMENT FACTORS

The data summarized in the following tables are derived from material presented in the State reports as well as from other fiscal information. Table 3 lists by States the amounts of unobligated Interstate construction (IC) balances (not yet assigned to projects) as of January 1, 1990, together with the corresponding estimated amount of State matching funds, adjusted to reflect lapsed fiscal year 1990 funds; apportionment of fiscal year 1992 funds; transfer of IC funds to I-4R under 23 U.S.C. 119; and allocations of Interstate discretionary funds through November 1990. The amounts just described have been included in adjustments to the estimate of the cost to complete the Interstate System in order to arrive at the net cost figures to be used in establishing the factors for apportionment of funds authorized by Subsection (b) of Section 108 of the Federal-Aid Highway Act of 1956, as amended.

Table 4 lists the estimates of costs by the States for all work not in authorized status as of January 1, 1990, which is deemed necessary to complete the Interstate System. In addition, there is tabulated the cost of work which has been accomplished on the Interstate System by States under the provisions of 23 U.S.C. 115 ("Construction by States in Advance of Apportionment -- Interstate System"), Section 122 ("Payment to States for Bond Retirement"), and Section 108(c) ("Advance Right-of-Way Acquisition"). These costs are ultimately to be reimbursed in part with Federal funds in the statutory ratio at the time of project authorization. The costs of work not financed -- not in authorized status -- as of January 1, 1990, are shown in three categories: (1) preliminary engineering, (2) right-of-way, and (3) construction. The summation of costs of these three elements of work plus the cost of projects undertaken in advance of apportionment of Interstate funds, less the total amounts already available (shown in Table 3), which take into consideration all apportionments, allocations, etc., through November 30, 1990, represent the remaining costs to be financed with Interstate construction funds and State matching funds to complete the Interstate System as estimated in detail by the States for apportionment factor purposes. The ratio of the Federal share

of this cost in each State to the sum of the Federal share of these costs in all the States determines the factors recommended for use in the apportionment of funds.

Table 5 shows in summary the remaining costs in each State as set forth in Table 4, the Federal share of these costs, and the resulting apportionment factor for each State. This table reflects apportionment factors computed in the same manner as in previous Interstate Cost Estimates.

COMPARISON OF 1989 AND 1991 ESTIMATES OF TOTAL SYSTEM COSTS

This cost comparison is developed by comparing the total System cost, from its beginning to its completion, as reflected in two Interstate cost estimates: the 1991 estimate and the 1989 estimate. This analysis reflects total cost which includes not only construction, but funds provided for FHWA administration and research, metropolitan planning, State highway planning and research, the Strategic Highway Research Program (SHRP) and demonstration projects authorized by Section 149(d) of the 1987 STURAA.

The estimated total cost for the Interstate System, as developed from the estimate submitted in January 1989 was $124.9 billion, of which $111.0 billion was the estimated Federal share. The 1991 total estimated cost without allowance for possible escalation in future program years is $128.9 billion, of which $114.3 billion is the estimated Federal share. This represents an increase of $4.0 billion in total cost of the Interstate System including construction, planning and research, FHWA administration and contingencies. These costs are shown in Table 6. Also, as shown in Table 6, the remaining cost-to-complete the Interstate System is $12.9 billion, of which $11.7 billion is the Federal share. Nearly 50 percent of this remaining cost is for work not yet accomplished on sections of the System which are already serving traffic. Such work, eligible under the Federal-Aid Highway Act of 1981, generally includes remaining phases of initial construction, major upgrading of segments incorporated into the System and which were not built with Interstate funds, and added lanes (mixed traffic and high occupancy vehicles) on open-to-traffic sections.

TABLE 3
AMOUNTS NOT INCLUDED IN COSTS USED TO DETERMINE APPORTIONMENT FACTORS IN 1991 ESTIMATE
(in thousands of dollars)

STATE	ADJUSTED UNOBLIGATED BALANCE INTERSTATE FUNDS *	ESTIMATED STATE FUNDS TO MATCH UNOBLIGATED BALANCE INTERSTATE FUNDS	TOTAL
ALABAMA	195,528	21,725	217,253
ALASKA	27,476	1,935	29,411
ARIZONA	17,297	1,049	18,346
ARKANSAS	30,971	3,441	34,412
CALIFORNIA	816,971	75,211	892,182
COLORADO	153,248	14,769	168,017
CONNECTICUT	347,163	38,574	385,737
DELAWARE	27,124	3,014	30,138
DIST. OF COL.	125,936	13,993	139,929
FLORIDA	173,314	19,257	192,571
GEORGIA	51,788	5,754	57,542
HAWAII	285,899	31,767	317,666
IDAHO	19,560	1,646	21,206
ILLINOIS	34,909	3,879	38,788
INDIANA	15,724	1,747	17,471
IOWA	39,880	4,431	44,311
KANSAS	15,196	1,688	16,883
KENTUCKY	63,981	7,109	71,090
LOUISIANA	234,255	26,028	260,283
MAINE	30,923	3,436	34,359
MARYLAND	255,548	28,394	283,942
MASSACHUSETTS	1,530,177	170,020	1,700,197
MICHIGAN	52,665	5,852	58,517
MINNESOTA	56,001	6,222	62,223
MISSISSIPPI	39,346	4,372	43,718
MISSOURI	25,580	2,842	28,422
MONTANA	36,394	3,512	39,906
NEBRASKA	26,843	2,983	29,826
NEVADA	27,050	1,424	28,474
NEW HAMPSHIRE	31,849	3,539	35,388
NEW JERSEY	299,869	16,549	316,418
NEW MEXICO	37,430	3,017	40,447
NEW YORK	105,011	581	105,592
NORTH CAROLINA	83,451	9,272	92,723
NORTH DAKOTA	27,203	3,023	30,226
OHIO	69,849	7,761	77,610
OKLAHOMA	32,461	3,607	36,068
OREGON	50,095	4,226	54,321
PENNSYLVANIA	282,618	31,402	314,020
RHODE ISLAND	33,160	3,684	36,844
SOUTH CAROLINA	77,075	8,564	85,639
SOUTH DAKOTA	33,381	3,269	36,650
TENNESSEE	39,065	4,341	43,406
TEXAS	266,750	29,639	296,389
UTAH	23,281	1,439	24,720
VERMONT	39,091	4,343	43,434
VIRGINIA	60,166	6,685	66,851
WASHINGTON	180,607	18,629	199,236
WEST VIRGINIA	42,144	4,683	46,827
WISCONSIN	23,614	2,624	26,238
WYOMING	27,498	2,156	29,654
TOTAL	6,622,414	679,107	7,301,521

* Unobligated balances as of 12-31-89 adjusted to reflect the fiscal year 1992 apportionment, and discretionary allocations, fund transfers, and lapses through 11-30-90.

TABLE 4
NATIONAL SUMMARY OF ESTIMATED COSTS TO COMPLETE SYSTEM, 1991 ESTIMATE, AS OF DECEMBER 31, 1989
(In thousands of dollars)

STATE	PRELIMINARY ENGINEERING	RIGHT-OF-WAY	CONSTRUCTION	BONDS, ADVANCE CONSTRUCTION, AND ADVANCE RIGHT OF WAY ACQUISITION PROJECT OBLIGATIONS	SUBTOTAL	AMOUNTS ALREADY MADE AVAILABLE (FROM TABLE 3)	ESTIMATED FEDERAL-AID AND STATE MATCHING FUNDS REQUIRED TO COMPLETE SYSTEM
ALABAMA	1,900	16,987	243,846	0	262,733	217,253	45,480
ALASKA	0	0	0	0	0	29,411	0
ARIZONA	0	0	12,969	0	12,969	18,346	0
ARKANSAS	0	0	0	0	0	34,412	0
CALIFORNIA	34,238	188,474	1,116,016	174,858	1,513,586	892,182	621,404
COLORADO	16,173	12,511	186,472	0	214,156	168,017	46,139
CONNECTICUT	0	22,206	299,167	103,137	424,509	385,737	38,772
DELAWARE	0	0	0	0	0	30,138	0
DIST. OF COL.	9,351	960	229,359	0	239,660	139,929	99,731
FLORIDA	3,209	10,693	243,211	100	257,213	192,571	64,642
GEORGIA	25,000	0	89,351	65,390	179,741	57,542	122,199
HAWAII	400	7,994	451,316	0	459,710	317,686	142,044
IDAHO	0	0	0	0	0	21,206	0
ILLINOIS	0	0	0	0	0	38,788	0
INDIANA	0	0	0	6,880	6,880	17,471	0
IOWA	0	0	0	0	0	44,311	0
KANSAS	0	0	0	0	0	16,883	0
KENTUCKY	0	4,268	94,881	15,725	114,874	71,090	43,784
LOUISIANA	711	34,701	259,572	0	294,984	260,283	34,701
MAINE	0	0	0	0	0	34,359	0
MARYLAND	0	68,818	446,008	17,138	551,964	283,942	268,022
MASSACHUSETTS	226,464	421,293	3,222,045	0	3,869,802	1,700,197	2,169,605
MICHIGAN	1,678	4,496	117,602	335	124,110	58,517	65,593
MINNESOTA	2,781	977	55,021	53,331	122,110	62,223	59,887
MISSISSIPPI	305	0	8,768	0	9,073	43,718	0
MISSOURI	0	0	0	0	0	28,422	0
MONTANA	0	0	0	0	0	39,906	0
NEBRASKA	0	0	0	0	0	29,826	0
NEVADA	0	0	0	0	0	28,474	0
NEW HAMPSHIRE	0	0	0	0	0	35,388	0
NEW JERSEY	5,584	19,324	637,206	0	662,114	316,418	345,696
NEW MEXICO	0	0	0	0	0	40,447	0
NEW YORK	894	17,974	79,264	100	98,232	105,592	0
NORTH CAROLINA	0	11,828	164,596	10,413	186,836	92,723	94,113
NORTH DAKOTA	0	0	0	0	0	30,226	0
OHIO	1,700	3,582	135,024	0	140,306	77,610	62,696
OKLAHOMA	0	0	34,033	0	34,033	34,033	0
OREGON	7,425	8,836	113,358	0	129,619	54,321	75,298
PENNSYLVANIA	26,806	99,784	551,162	396,003	1,073,755	314,020	759,735
RHODE ISLAND	0	50	6,695	10	6,755	36,844	0
SOUTH CAROLINA	1,128	13,485	111,838	0	126,451	85,639	40,812
SOUTH DAKOTA	0	0	0	0	0	36,650	0
TENNESSEE	3,817	5,560	43,597	0	52,974	43,406	9,568
TEXAS	5,005	4,494	392,907	29,344	431,750	296,389	135,361
UTAH	40	0	3,960	0	4,000	24,720	0
VERMONT	0	0	0	0	0	43,434	0
VIRGINIA	0	18,891	344,256	5,172	368,319	66,851	301,468
WASHINGTON	31,802	18,246	529,028	6,742	585,818	199,236	386,582
WEST VIRGINIA	16	0	0	0	16	46,827	0
WISCONSIN	18,607	88,296	213,979	0	320,882	26,238	294,644
WYOMING	0	0	0	0	0	29,654	0
TOTAL	425,034	1,124,716	10,445,506	884,678	12,879,934	7,301,521	5,327,976

TABLE 5
ESTIMATED FEDERAL-AID AND STATE MATCHING FUNDS TO COMPLETE THE SYSTEM AND APPORTIONMENT FACTORS FOR DISTRIBUTION OF 1993 FISCAL YEAR AUTHORIZATION

STATE	ESTIMATED FEDERAL-AID AND STATE MATCHING FUNDS REQUIRED TO COMPLETE SYSTEM (THOUSANDS)	ESTIMATED FEDERAL SHARE OF FUNDS REQUIRED TO COMPLETE SYSTEM (THOUSANDS)	APPORTIONMENT FACTORS (PERCENT)
ALABAMA	45,480	40,932	0.715
ALASKA	0	0	0.000
ARIZONA	0	0	0.000
ARKANSAS	0	0	0.000
CALIFORNIA	621,404	569,020	9.937
COLORADO	46,139	42,083	0.735
CONNECTICUT	38,772	34,896	0.609
DELAWARE	0	0	0.000
DIST. OF COL.	99,731	89,758	1.568
FLORIDA	64,642	58,178	1.016
GEORGIA	122,199	109,979	1.921
HAWAII	142,044	127,840	2.233
IDAHO	0	0	0.000
ILLINOIS	0	0	0.000
INDIANA	0	0	0.000
IOWA	0	0	0.000
KANSAS	0	0	0.000
KENTUCKY	43,784	39,406	0.688
LOUISIANA	34,701	31,231	0.545
MAINE	0	0	0.000
MARYLAND	268,022	241,220	4.213
MASSACHUSETTS	2,169,605	1,952,645	34.100
MICHIGAN	65,593	59,034	1.031
MINNESOTA	59,887	53,898	0.941
MISSISSIPPI	0	0	0.000
MISSOURI	0	0	0.000
MONTANA	0	0	0.000
NEBRASKA	0	0	0.000
NEVADA	0	0	0.000
NEW HAMPSHIRE	0	0	0.000
NEW JERSEY	345,696	327,616	5.721
NEW MEXICO	0	0	0.000
NEW YORK	0	0	0.000
NORTH CAROLINA	94,113	84,702	1.479
NORTH DAKOTA	0	0	0.000
OHIO	62,696	56,426	0.985
OKLAHOMA	0	0	0.000
OREGON	75,298	69,440	1.213
PENNSYLVANIA	759,735	683,762	11.941
RHODE ISLAND	0	0	0.000
SOUTH CAROLINA	40,812	36,731	0.642
SOUTH DAKOTA	0	0	0.000
TENNESSEE	9,568	8,611	0.150
TEXAS	135,361	121,825	2.128
UTAH	0	0	0.000
VERMONT	0	0	0.000
VIRGINIA	301,468	271,321	4.738
WASHINGTON	386,582	350,437	6.120
WEST VIRGINIA	0	0	0.000
WISCONSIN	294,644	265,180	4.631
WYOMING	0	0	0.000
TOTAL	6,327,976	5,726,170	100.000

TABLE 6 - ESTIMATED TOTAL COST OF THE INTERSTATE SYSTEM

(In millions of dollars)

	Total Cost	Federal Funds
1991 estimate of the cost of the designated System of 42,799 miles remaining to complete from Table 4 (as of January 1, 1990)	12,880	11,667
Total obligations as of Jan. 1, 1990	111,376	98,262
Subtotal: Construction cost of the 42,799-mile System	124,256	109,929
State highway planning and research	1,986	1,787
Metropolitan planning	400	369
FHWA Administration and Research/SHRP	2,135	2,135
Contingencies	123	80
GRAND TOTAL	128,900	114,300

Table 7 presents a comparison between the estimated construction costs as now submitted to the Congress and the 1989 estimate furnished the Congress in January 1989. The table reflects a net $3.771 billion increase in the construction cost of the system since the 1989 estimate. As shown in the cost change analysis following Table 7, that increase results from (1) an increase of $2.744 billion due to construction items including overruns, design changes, and increases on added lane and added interchange projects; (2) an increase of $0.676 billion due to increases in right-of-way and preliminary engineering costs; (3) an increase $0.548 billion due to higher unit prices for work remaining to be completed and for social, economic and environmental considerations; and (4) a decrease of $0.197 billion for withdrawals, fund transfers and other legislative provisions.

TABLE 7 - COMPARISON OF THE 1989 AND THE 1991 ESTIMATES OF TOTAL COST OF THE INTERSTATE SYSTEM
(In millions of dollars)

	1989 ICE		1991 ICE	
	Total Cost	Federal Share	Total Cost	Federal Share
Construction of Interstate:				
1989 ICE (42,797 miles)	120,485	106,902	---	---
1991 ICE (42,799 miles)	---	---	124,256	109,929
State highway planning and research	1,850	1,667	1,986	1,787
Metropolitan planning	380	338	400	369
FHWA administration and research/SHRP	1,992	1,992	2,135	2,135
Contingencies	193	101	123	80
GRAND TOTAL	124,900	111,000	128,900	114,300

The following is a brief summary and tabulation of the costs which account for the difference between the 1989 and 1991 estimates of the total cost of construction of the System.

	Cost Change (In millions of dollars)	
System adjustments:		
(a) Major system withdrawals and adjustments and fund transfers	$ -83	
New Legislation:		
(b) Changes in eligibility due to provisions of the Surface Transportation and Uniform Relocation Assistance Act of 1987 and the Department of Transportation and Related Agencies Appropriations Act, 1989 and 1991	-114	
Unit price changes:		
(c) Changes in total cost attributable to the increase in unit prices between the base year 1987 and the base year 1989	389	
Increased emphasis on social, economic, and environmental considerations:		
(d) Changes due to social, economic, or environmental impact considerations including noise abatement measures, replacement park land, landscaping, and special design features	159	
Subtotal		351
Preliminary engineering and right-of-way:		
(e) Change in right-of-way costs for segments and features not included in items (a) and (c)	287	
(f) Change in preliminary engineering costs for segments and features not included in items (a) and (c)	389	
Subtotal		676

Cost Change
(In millions of dollars)

Construction items:			
(g)	Changes due to design changes and refinements for roadway items on unbuilt sections and on major upgrading projects	316	
(h)	Additional interchanges and grade separations that have been approved for inclusion in the System since the 1989 estimate	401	
(i)	Changes to structure designs, railroad grade separations, highway grade separations, viaducts, and other bridges and tunnels	592	
(j)	Changes in the cost on additional lane projects from those reported in the 1989 estimate.	814	
(k)	Construction project overruns; includes an increase in costs on projects in authorized status on January 1, 1990, due to unforeseen conditions or circumstances	621	
	Subtotal		2,744
	TOTAL		3,771

Table 8 summarizes the status of Interstate authorizations and apportionments versus the current estimate of Interstate needs. This table shows that the currently authorized funds for initial construction are short by $4.4 billion in covering the cost of the System as reflected in this estimate. The table also shows that additional apportionments of $5.8 billion are required to complete the initial construction of the Interstate System. Adjustments to the authorizations and apportionments reflecting amounts not available for Interstate purposes have been identified in Table 8.

TABLE 8 - AUTHORIZATION AND APPORTIONMENT STATUS
(In millions of dollars)

Authorizations:	
Total amounts authorized for initial construction by the 1954 and subsequent Federal-Aid Highway Acts and the 1987 Surface Transportation and Uniform Relocation Assistance Act chargeable to the Highway Trust Fund	$113,740
Less amounts not available for initial Interstate construction 1/	3,831
Net remaining authorized amount	109,909
Current estimate of needed Interstate authorization for initial construction	114,300
Estimated additional Federal funds needed to be authorized	4,391
Apportionments:	
Total apportionments for fiscal years through 1992 for initial construction chargeable to the Highway Trust Fund	112,340
Less amounts not available for initial Interstate construction 1/	3,831
Net remaining apportioned amounts	108,509
Current estimate of needed Interstate apportionments for initial construction	114,300
Estimated apportionment required for 1993 and later fiscal years for initial construction	5,791

1/ Represents Interstate apportionment transfers and reductions of $918.0 million pursuant to 23 U.S.C. 103(e)(4);

$1,723.2 million pursuant to Sections 104(b)(1) of the 1978 STAA, 103(a) of the 1982 STAA and 102(c) of the 1987 STURAA; $51.3 million pursuant to Section 218 of the Urgent Supplemental Apportionment Act of 1982; $660.1 million pursuant to 23 U.S.C. 119(d); $49.6 million pursuant to PL 98-229, Section 7; $164.3 million pursuant to PL 99-190; $1.8 million pursuant to Section 9(d) of the Federal Aid Highway Act of 1981; $39.0 million for Strategic Highway Research Program pursuant to 23 U.S.C. 307(d)(4); and $223.9 million for demonstration projects pursuant to Section 149(d) of the 1987 STURAA.

CONCLUSION

The estimated cost of completing The Dwight D. Eisenhower System of Interstate and Defense Highways, which is to be borne by the Highway Trust Fund and State matching funds, and the apportionment factors contained herein have been computed in accordance with Title 23 U.S.C. The 1991 estimates are sound engineering appraisals of the cost to complete the Interstate System in each State based on 1989 price levels, but do not represent a commitment of funds to the location, design, or cost of individual projects to be undertaken on the System. Before construction, individual projects on the System covered by this estimate will be studied further by the State highway departments and FHWA in preparing the detailed designs, plans and specifications on which actual construction bids will be invited.

Existing legislation does not provide sufficient authorization to complete the Interstate System as defined by current law. An additional $4.4 billion is required to fully complete the System as currently defined and estimated.

The Department of Transportation is developing a legislative proposal containing provisions for the reauthorization of the Federal-aid highway program. One part of that proposal will include additional authorizations for the timely completion of the Interstate Highway System based on the information provided during the development of the 1991 estimate. Nevertheless, the 1991 estimate reflects the most current estimate of each State's needs, and the resultant apportionment factors listed in Table 5, represent a sound basis for apportioning Interstate construction funds.